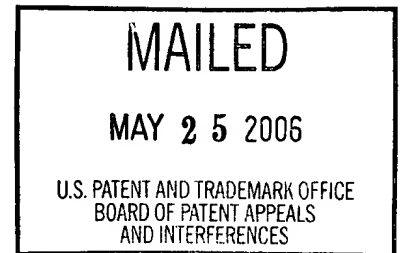


The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MICHAEL S. LAMPHERE,
JOHN S. GRAHAM, and
RICHARD S. ROBERTSON



Appeal No. 2006-1159
Application No. 09/994,342

ON BRIEF

Before GARRIS, WALTZ, and KRATZ, Administrative Patent Judges.

GARRIS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal which involves claims 1-20.

The subject matter on appeal relates to a method for electrochemically machining a tandem blisk which comprises mounting the blisk in a multiaxis electrochemical machine, electrochemically machining a first row of blades in one stage of the blisk while mounted in the machine and electrochemically machining a second row of blades in another stage of the blisk while still mounted in the machine. This appealed subject matter also relates to a machine having means for performing the steps of the aforementioned method. The appealed subject matter is adequately illustrated by independent claims 1 and 11, which read as follows:

1. A method for electrochemically machining a tandem blisk comprising:

mounting said blisk in a multiaxis electrochemical machine;

electrochemically machining in a first sequence a first row of blades in one stage of said blisk while mounted in said machine; and

electrochemically machining in a second sequence a second row of blades in another stage of said blisk while still mounted in said machine.

11. A machine for electrochemically machining a tandem blisk comprising:

means for mounting said blisk;

means for electrochemically machining in a first sequence a first row of blades in one stage of said blisk while mounted in said machine; and

means for electrochemically machining in a second sequence a second row of blades in another stage of said blisk while still mounted in said machine.

The prior art set forth below is relied upon by the examiner as evidence of obviousness:

Bruns et al. (Bruns)	4,851,090	Jul. 25, 1989
Hunter et al. (Hunter)	5,641,391	Jun. 24, 1997
Hatanaka (Japanese Application)	JP 02-0145217	Jun. 4, 1990 ¹

The admitted prior art described in paragraphs 12-15 of the subject specification.

Claims 1, 2, 11-15, and 18-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bruns in view of Hunter and Hatanaka, and claims 3-10, 16, and 17 are correspondingly rejected over these references and further in view of the admitted prior art.

¹ The examiner refers to this reference as "Mitsuharu" (i.e., the inventor's first name). Our understanding of this reference is derived from the English translation thereof, a copy of which was mailed to the appellants on October 28, 2005, that is, subsequent to both the appellants' Brief and the examiner's Answer. We need not consider any issues raised by the examiner's tardy submission of the English translation to the appellants or the appellants' criticism in the Brief of the examiner for having relied upon the English abstract only in making the final rejection. This is because the examiner's tardiness is harmless in light of our disposition of this appeal.

We refer to the Brief and to the Answer for a thorough exposition of the opposing viewpoints expressed by the appellants and by the examiner concerning the above noted rejections.

Opinion

For the reasons which follow, these rejections cannot be sustained.

We perceive considerable merit in the appellants' argument that the Hunter reference is not analogous prior art. As explained in the Brief, this reference is not from the appellants' field of endeavor and is not reasonably pertinent to the particular problem with which the appellants were involved. See In re Clay, 966 F.2d 656, 658, 23 USPQ2d 1058, 1060 (Fed. Cir. 1992). The examiner's position that "Hunter . . . is considered relevant to Appellant's [Appellants'] field of endeavor" (Answer, page 9) is antithetical to the fact that Hunter is directed to fabrication of microstructures as opposed to blisk structures of the type under consideration for use in turbines.

Because the Hunter reference is nonanalogous art, the rejections before us cannot be sustained for this reason alone. However, these rejections would not be sustainable even if Hunter were assumed to be analogous prior art. 'This is because (as correctly argued by the appellants in their Brief) the Bruns, Hunter, and Hatanaka references contain no teaching or suggestion for combining their respective disclosures in such a manner as to result in the here claimed subject matter.

In this regard, the examiner states that his proposed "modification of Bruns is to use two sets of electrodes, as taught by Mitsuharu [i.e., Hatanaka], to machine two different geometries, i.e.-rows of a blades, as taught by Hunter" (Answer, page 11). This statement simply is not supported by the applied reference disclosures. Only Bruns teaches

electrochemically machining first and second rows of blades in a tandem blisk, and this teaching relates to using only one set of electrode tools for both blade rows which involves remounting the blisk and re-setting up the tools. While Hatanaka uses two sets of electrodes for respectively rough and finish machining a turbine blade, these are sequential machining operations performed on the same blade of a single blade-row blisk. Thus, at best, a combination of Bruns and Hatanaka would have yielded a method and machine using two sets of electrodes for first rough and then finish machining each blade of a tandem blisk which would require re-mounting and re-setting up contrary to the appealed claims. As for Hunter, the teaching therein of “multiple electrodes providing . . . for multiple electrode geometries” (column 10, lines 4-8), at best, would have suggested no more than what Hatanaka teaches which is the use of two different electrodes for obtaining the different geometries respectively required by rough machining versus finish machining operations.

In light of the foregoing, it is our determination that the examiner’s proposed combination of the above discussed references lacks evidence of a teaching, suggestion, or motivation supporting the combination thus inferring that the examiner has applied impermissible hindsight of the appellants’ own disclosure as a blueprint for piecing together the applied prior art. See In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). Therefore, we are constrained to hereby reverse the examiner’s § 103 rejection of claims 1, 2, 11-15, and 18-20 as being unpatentable over Bruns in view of Hunter and Hatanaka. Because it is likewise deficient, the corresponding rejection of claims 3-10, 16, and 17 over the aforementioned references and further in view of the admitted prior art also must be reversed.

